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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,326	10/22/2003	Dean Foote	LAMA121883	8551
26389 7590 03/07/2007 CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC 1420 FIFTH AVENUE SUITE 2800 SEATTLE, WA 98101-2347			EXAMINER PATEL, VISHAL A	
			ART UNIT 3673	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			03/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/692,326

Applicant(s)

FOOTE ET AL.

Examiner

Vishal Patel

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Peil et al (US. 4,877,217).

Peil discloses a seal assembly for a reciprocating shaft (intended use) comprising a body having a bore (bore 22), a shaft (shaft 26) that moves reciprocally within the body between an extended position from the body and a retracted position within the body (shaft 26 reciprocates), at least one first circumferential seal (seal 30 seals the shaft) positioned in the body and circumscribing the shaft, the first circumferential seal performing a dedicated seal function of preventing fluids from migrating along the shaft from a first region of the body, the shaft having a first seal travel area (seal area that is contacted by first seal 30) which is in contact with the first seal during axial reciprocating movement of the shaft (portion that contacts as seen in figures 2-3), *at least a portion of the first seal travel area extending from the body where it is exposed to contaminants when the shaft is in the extended position (intended use)*, at least one second circumferential seal (seal 32) positioned in the body and circumscribing the shaft in axially spaced relation to the first circumferential seal (seal 30), the second circumferential seal being dedicated to performing the same sealing function as the first circumferential seal (the seal 32 is capable of sealing the shaft in an event the first seal fails) and serving as a redundant back up

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seal until the first circumferential seal experiences seal failure (intended use when the first seal fails, but the seal 32 is a redundant seal for preventing fluid from entering the second region), the second circumferential seal being positioned to prevent fluid from migrating along the shaft from the first region of the body and to maintain the seal at the first end of the shaft in the event of a failure of the first circumferential seal (intended use when the first seal fails and a resultant would occur, the second seal 32 is a redundant seal for the first seal 30), the shaft having a second seal travel area (area of the shaft 26 that only contacts seal 32) which is in contact with the second seal during axial reciprocating movement of the shaft the second seal area remaining sheltered within the body even when the shaft is in the extended position (the second seal area is sheltered in the body, see figures 1-3), the first seal travel area and the second seal travel area being axially spaced separate and distinct areas on the shaft (the first seal travel area is distinct from the second seal travel area), such that damage to the exposed portion of the first seal travel area leading to a failure of the at least one first circumferential seal does not lead to failure of the at least one second circumferential seal, as the second circumferential seal engages the second seal travel area which is separate and distinct from the first seal travel area (as seen in figures 2-3, an outer surface of the shaft 26 between seals 30 and 32 is smaller than the outer surface of the shaft 26 between the second seal 32 and end of 36, see attached figure).

The shaft is ram shaft of a blow out preventer.

The seal including a seal cluster having a primary seal and a seal carrier (carrier as shown in attached figure 2 and primary seal 30 and 32).

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Rasmussen (US. 1,709,949).

Rasmussen teaches a seal assembly having a body having a bore (body having shaft 260), a shaft (260) that is a ram shaft of a blow out preventer, a first circumferential seal (seal 85) positioned in the body that contacts a first seal area of the shaft (where the first circumferential seal contacts the shaft 260), a second circumferential seal (either 118 or 55) positioned in the body that contacts a second seal area (where the second circumferential seal contacts the shaft 261) of the shaft that is sheltered in the body and distinct from the first seal area and the second circumferential seal is a redundant seal. The configuration of the second circumferential seal relative to the first circumferential seal prevents a total seal loss of the first circumferential seal and prevents well fluids from flowing past the first circumferential seal in the event of a blow out of the first circumferential seal (this is the case since if the seal 85 fails the seal 55 prevents any fluid from the bottom to flow past the first circumferential seal and the seal 118 prevents any fluid from the top to flow past the first circumferential seal).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peil in view of Thompson (US. 3,987,846).

Peil discloses the invention substantially as claimed above but fails to disclose that the seal cluster having a wiper seal and an O-ring seal. Thompson discloses that a groove in a housing (26) having at least three seals (seals in 27 and 28). It would have been obvious to one

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having ordinary skill in the art at the time the invention was made to configure the seal cluster of Peil to have plurality of seals as taught by Thompson, to provide an effective seal around a polished rod (column 2, line 65 to column 3, line 4 of Thompson).

Response to Arguments

6. Applicant's arguments filed 12/18/06 have been fully considered but they are not persuasive.

7. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., allows drilling operations to continue, to shut down the well immediately and render the blow out preventer inoperative, toxicity of hydrogen sulfide gas, drilling crew will be running from the site, pumping of nitrogen down the well to form an ice plug,) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicants' argument to the operation of wells and drilling operation are not persuasive because this is not claimed. Furthermore applicant only claims a seal assembly with the structure that is taught by Peil and Rasmussen.

Applicants' addition of limitation dedicated to the claim does not overcome the rejections above since both Peil and Rasmussen seal are dedicated to perform a seal function.

Applicants' argument against Peil that the seals are positioned on a different portion of the shaft and performing a different sealing function is not persuasive because as stated in the claims the seals are positioned at different areas of the shaft and contact different areas of the

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shaft, which is taught by Peil. Furthermore the seals 30 and 32 are preventing fluid from migrating toward 71.

As stated in the rejection that applicant is claiming that in an event that the first seal fails which is considered to be method/intended use limitations and given little patentable weight.

The seal assembly of Peil and Rasmussen teach all the structural limitations of the claims.

Applicants' argument that the Rasmussen fails to show that the second seal area of the shaft is sheltered with the housing is not persuasive because as shown in figure 1, the shaft is exposed to fluid at 260 but the second area above 261 or 261 is sheltered with in the hosing.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

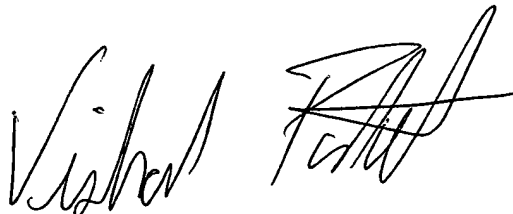
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 571-272-7060. The examiner can normally be reached on 6:30am to 8:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia L. Engle can be reached on 571-272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP
February 28, 2007

A handwritten signature in black ink, appearing to read 'Vishal Patel', with a stylized flourish at the end.

Vishal Patel
Patent Examiner
Tech. Center 3600

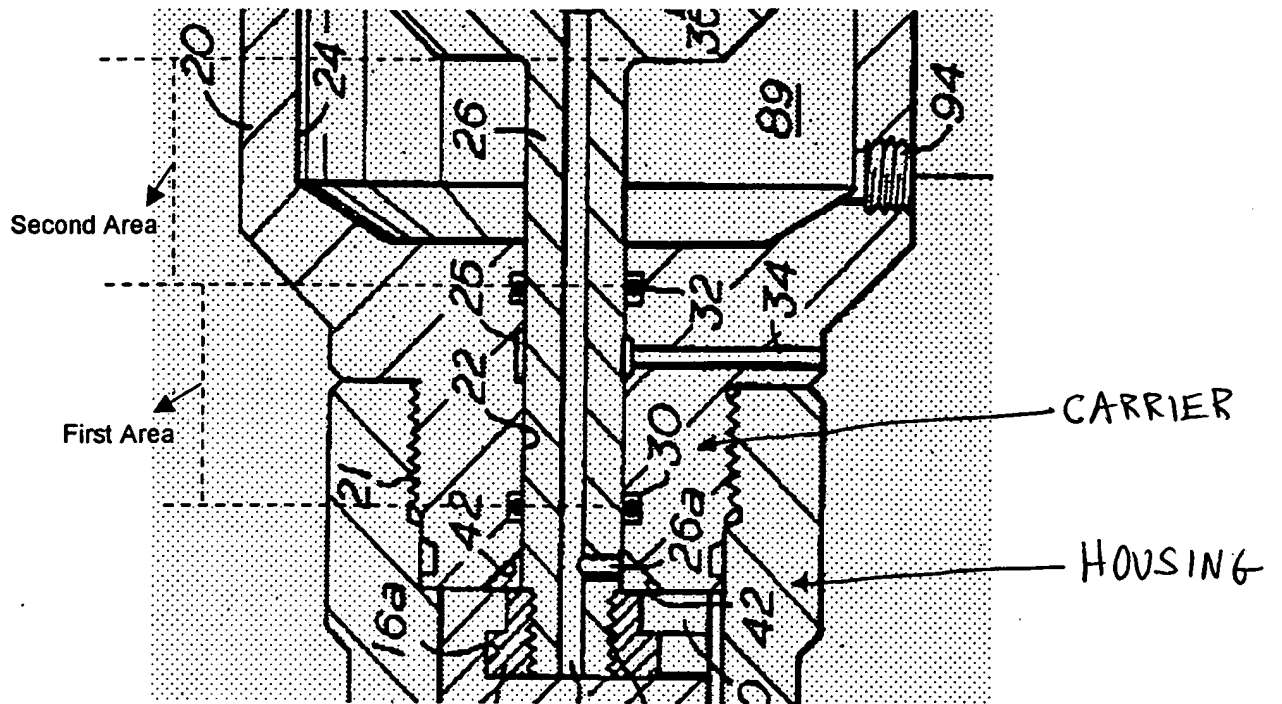


FIG. 2

US: 4,877,217